APR 17 1997

# WORKSHOP IN NEW HYPERSTRUCTURE

Second session.
(First was a video and discussion without TN.)

/blocks: mostly added 17.04.20

# THE HISTORY OF COMPUTERS

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1945 — 1955 — 1960 — 1965 — 1975 — 1981 — 1985 — 1995 ... WEB

8 inventors

(especially as we see it in the Xanadu project)

1955: TN start serious note-taking

Nov 57: World's first rock musical

TN's first movie

1960: Xanadu paradigm

Ted enters field — HText, links, transclusion

Xerox PARC first personal computer

PARC interface

TN speaks at PARC, 1972

... S-100 Bus ... Hype

IBM PC

Mac — Media Lab

... Mac saved by Adobe & "desktop publishing"

CHAOS

redesign of Xu

1979: 'Swarthmore Summer' TN, Roger Gregory, Mark Miller, Stuart Greene, Roland Kay & ...

NEW TECH BASIS

MARK I B/4 MISTAKE

REDESIGN

FUNDING BY AUTODESK, INC.

TN was not technically involved.

COMPLETION OF XANADU 88.1

Ted turns inside-out to OSMIC viewpoint

Theory of micropayments

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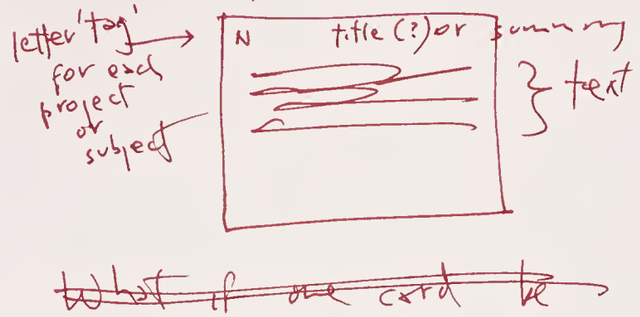
# HISTORY OF XANADU CONCEPT

## 1. Note-taking systems




~~What if one card is~~

EXPECTATION OF NEW SUBJECTS AND NEW TERMINOLOGY.

Humpty Dumpty rule.

USES OF THIS.

A. HELPING ME REMEMBER. The next idea is formulated more easily.

B. PROJECTS. Writings plays columns FROM THE CARDS.
this prevents "Writer's Block."

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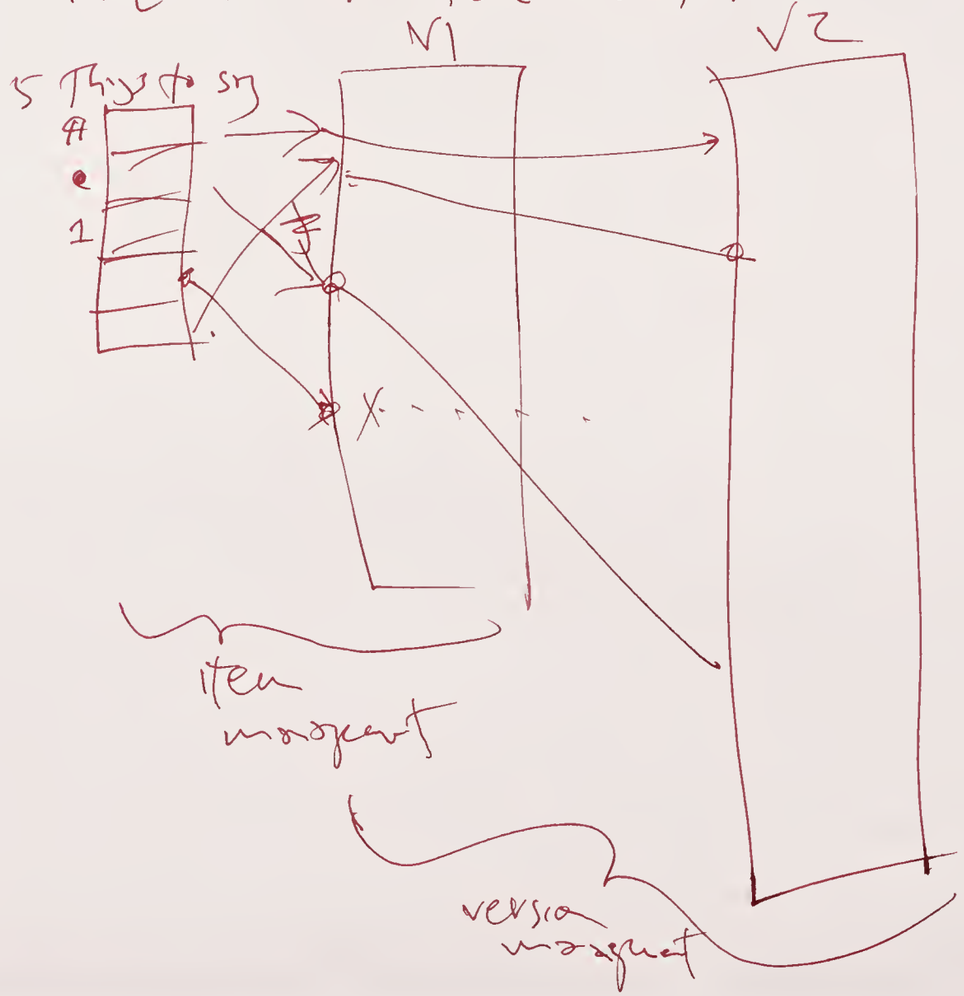
# MOLTEN THOUGHT: text systems and the Nature of Writing

for technical people to understand nature of writing.

VERSION MANAGEMENT
ITEM MANAGEMENT.




INTERCOMPARE,
CONSIDER
ALTERNATIVES

VERSION MANAGEMENT IN ARCHITECTURE = an example.

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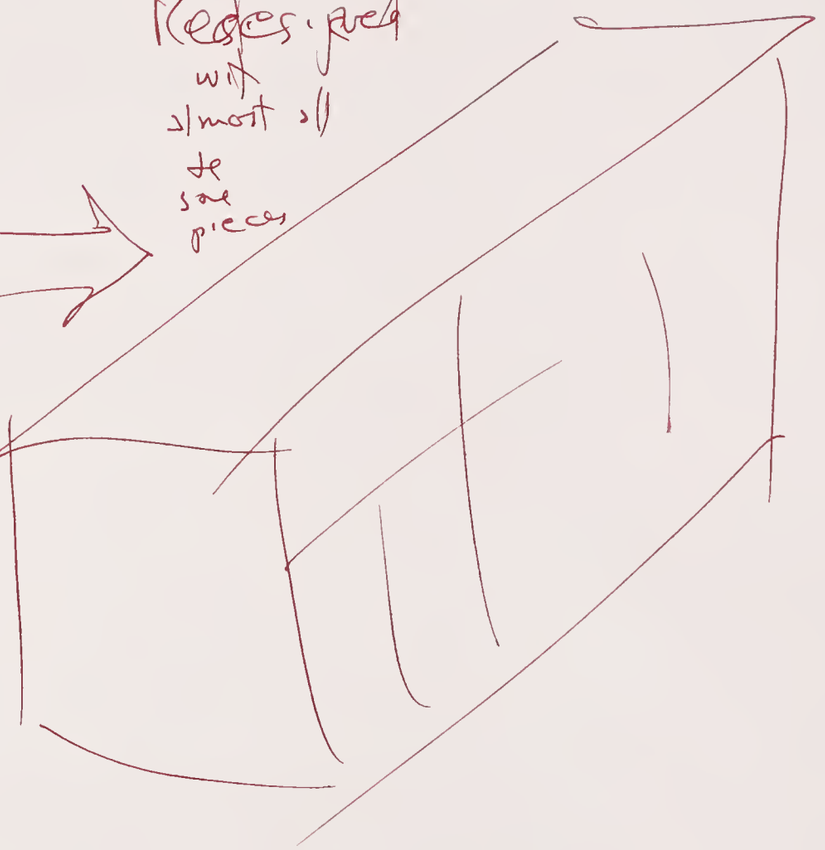
Charles & Ray Eames, designers. HOUSE IN L.A.

Original design

They decided their first design would spoil the land so they redesigned it completely ——

Redesigned with almost all the same pieces



WRITING IS A ~~DES~~ KIND OF DESIGN. → ~~S~~ (rest) overall structure from ideas ↓ pieces.

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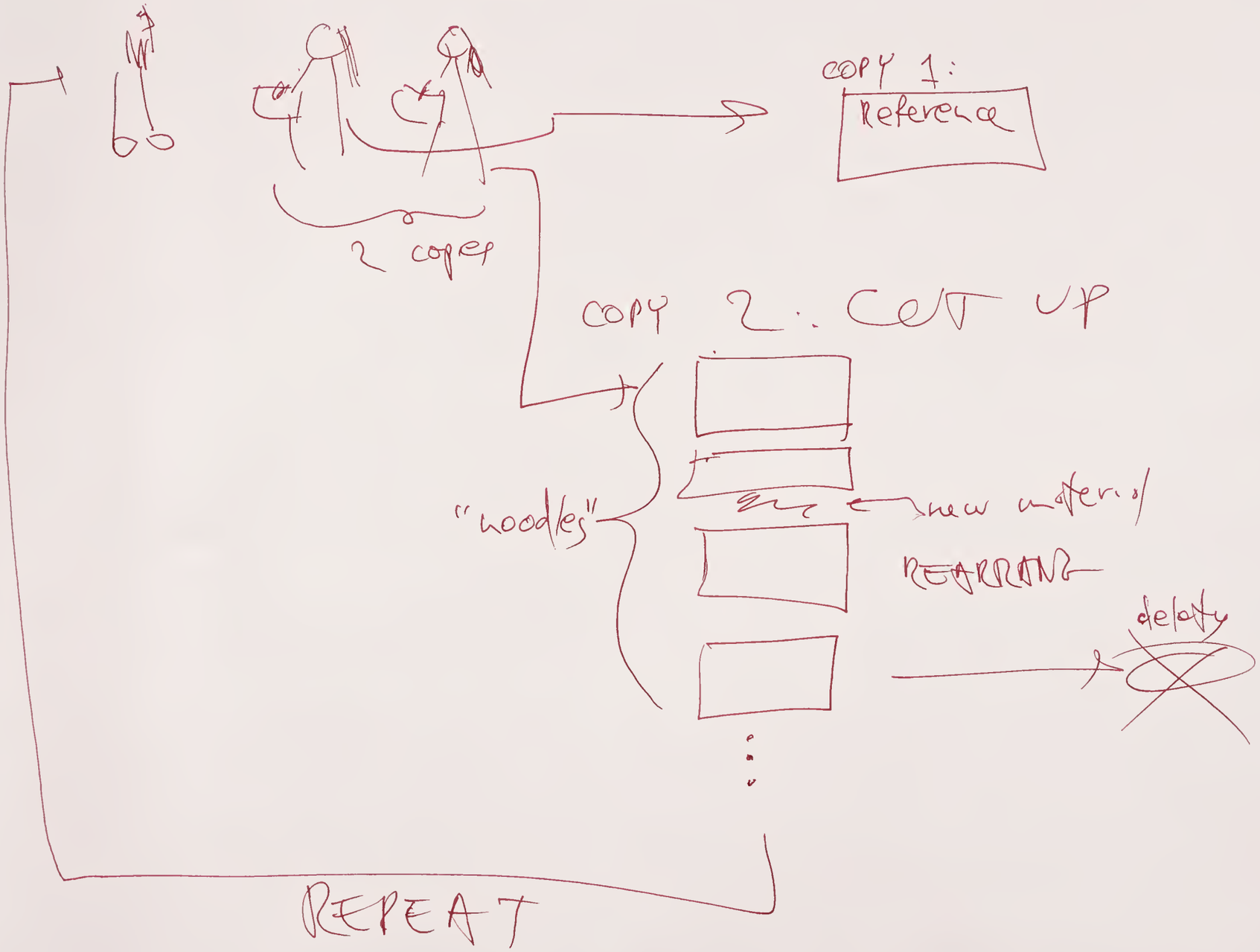
# TOLSTOY NOODLES.

The system many people invent independently.
"Yasnaya Polyana"




DRAFT:
combination of
old &
new material

"Fair draft"
author's
desk copy

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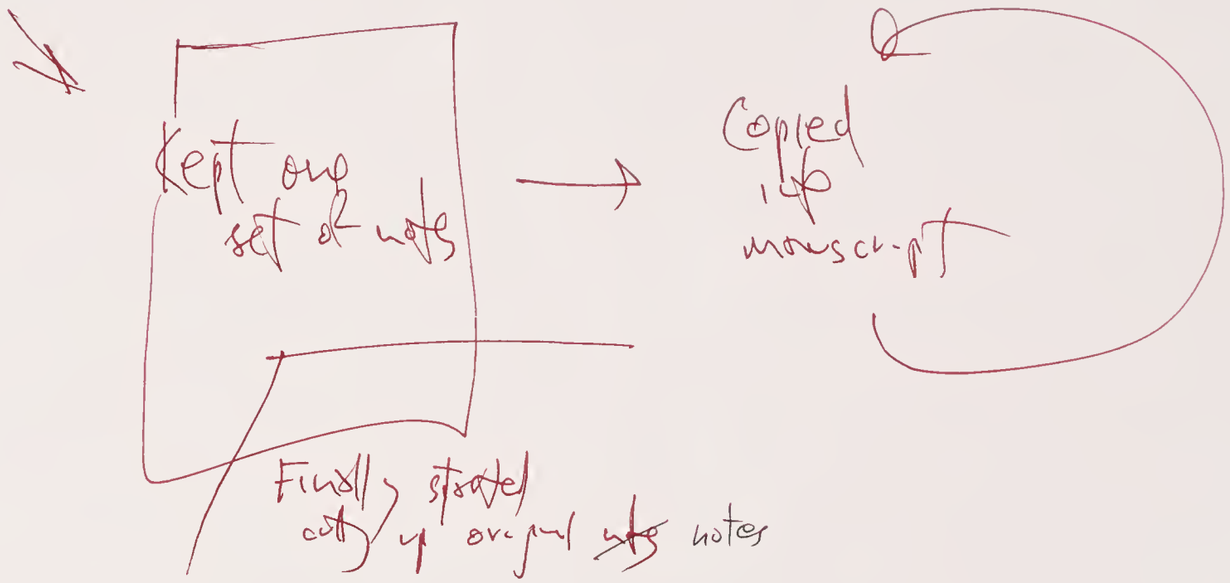
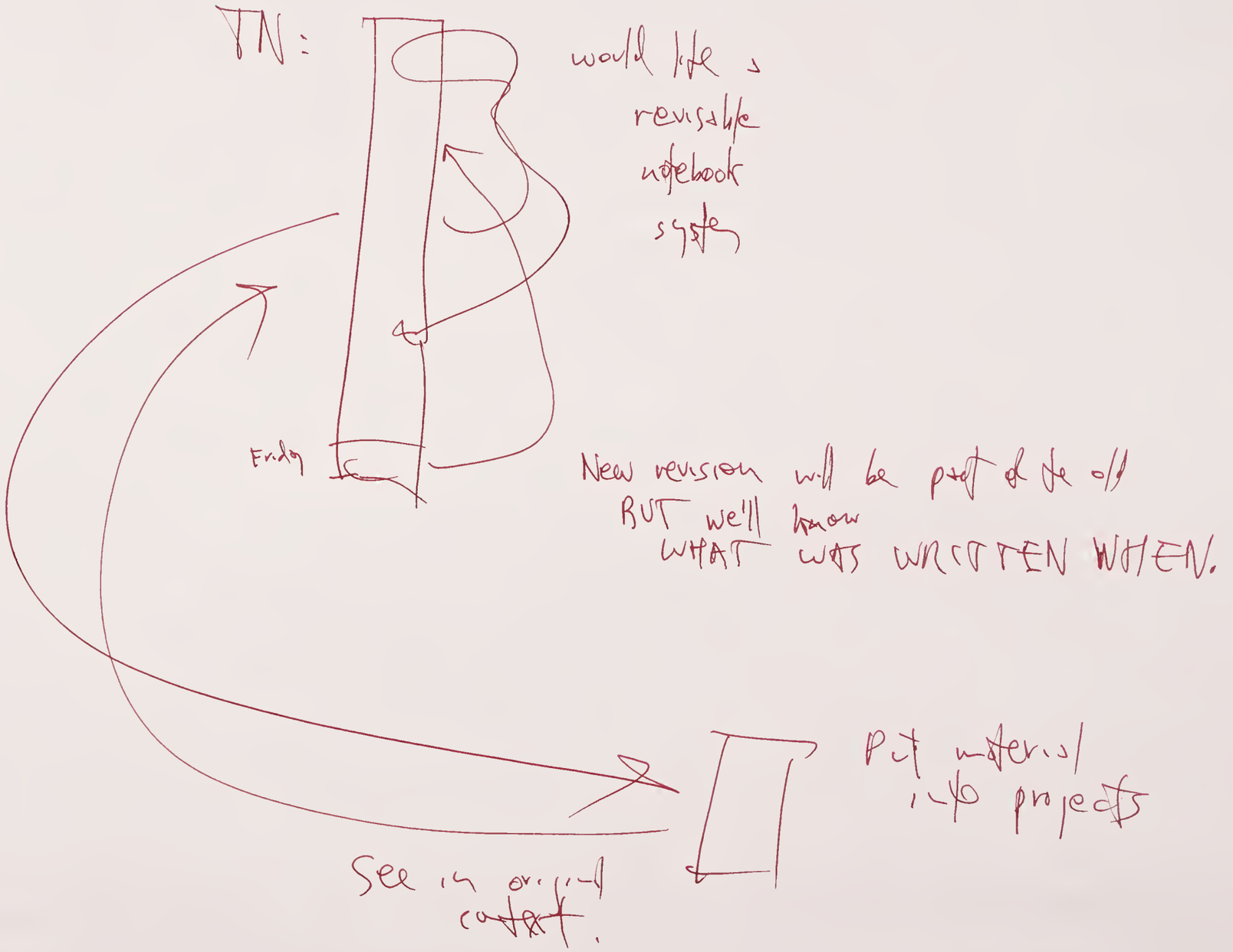
Everybody re-invents this method.

Henry David Thoreau.



NOTEBOOK APPROACH. Individuals
laboratories (eg Bell) → NO BACK-CHANGES.



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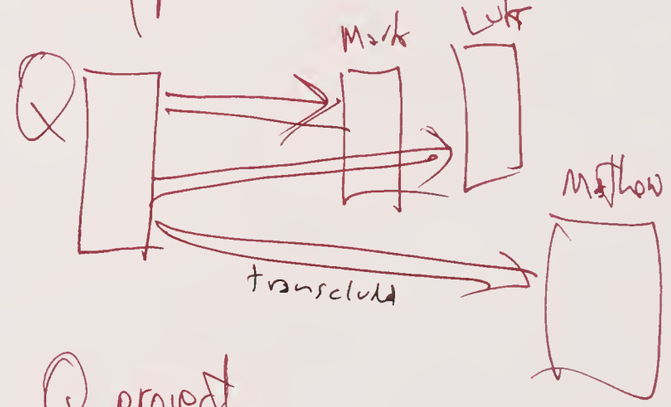
# 2. INTERCOMPARISON

see and compare
the differences.

for example, the hypothetical ancient Christian text called

Luke
Matthew
Mark
} 3 books of the bible very close to each other.

Q hypothesis =




Q project
rebuilding this hypothetical document.

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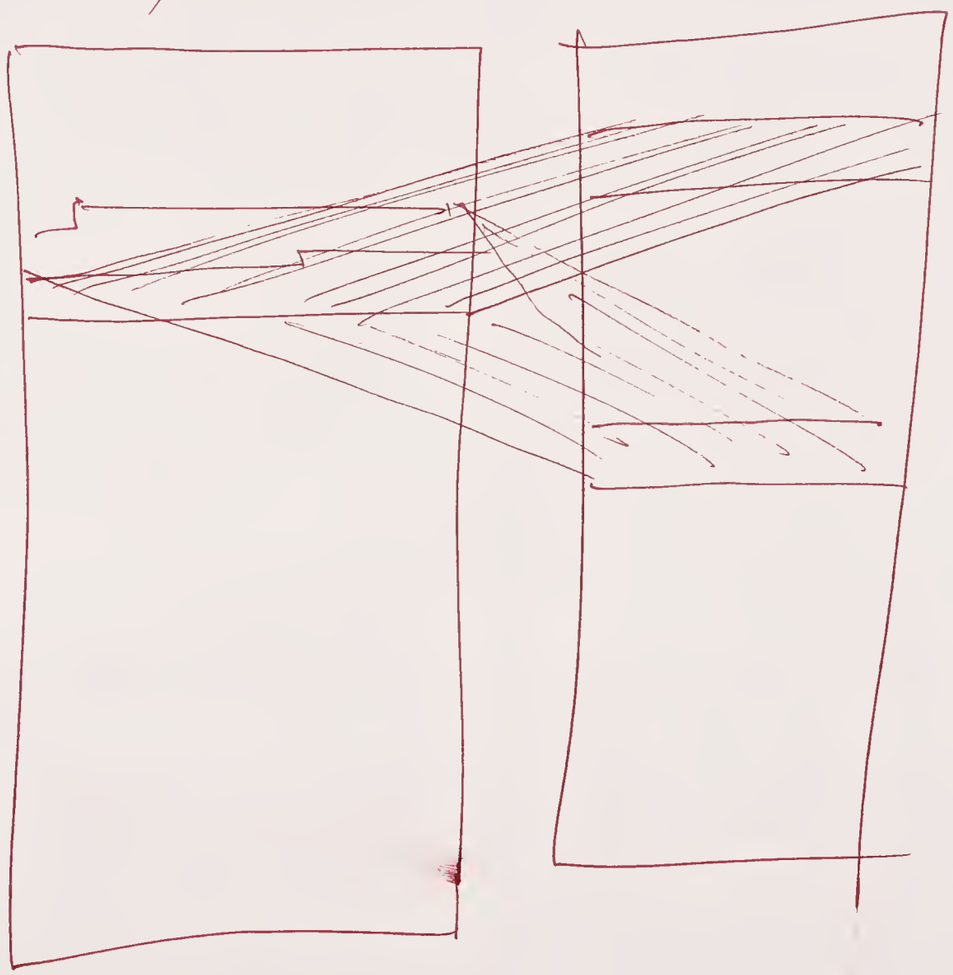
Intercompany VERSIONS.



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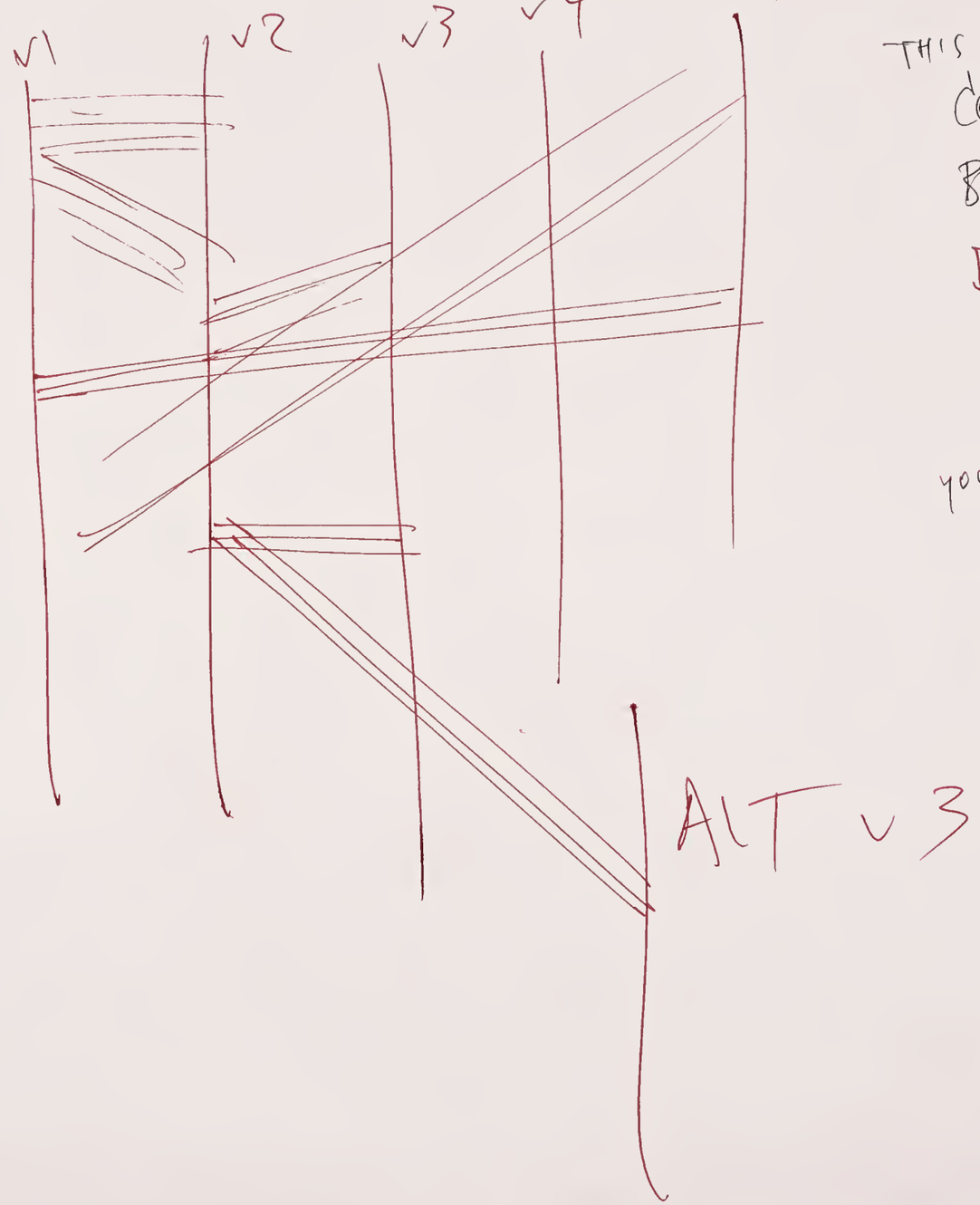
A visualization for

Multiple versions of linear text




THIS PICTURE COULD BE HARD TO UNDERSTAND —

BUT:

If you can turn the relations up & down in visibility (brighter and darker)

you can see the relations you prefer to see

MULTIPLE VERSIONING
IS based on

TRYING TO OPTIMIZE DESIGN

DIFFERENT VERSIONS FOR
DIFFERENT USES

TRYING TO SEE
THE WHOLE
AND DETAILS
SIMULTANEOUSLY

RE-USE of some materials ACROSS PROJECTS

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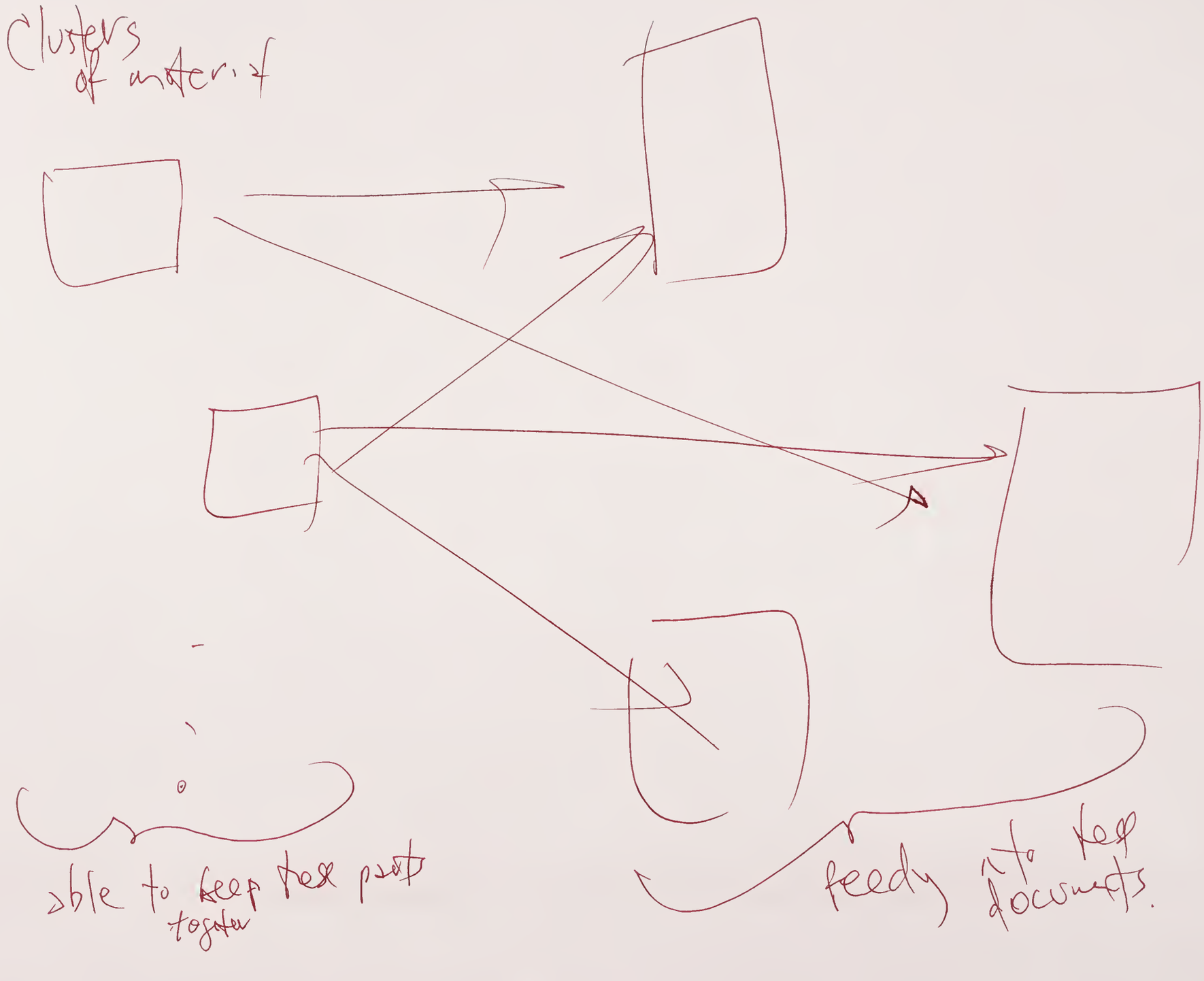
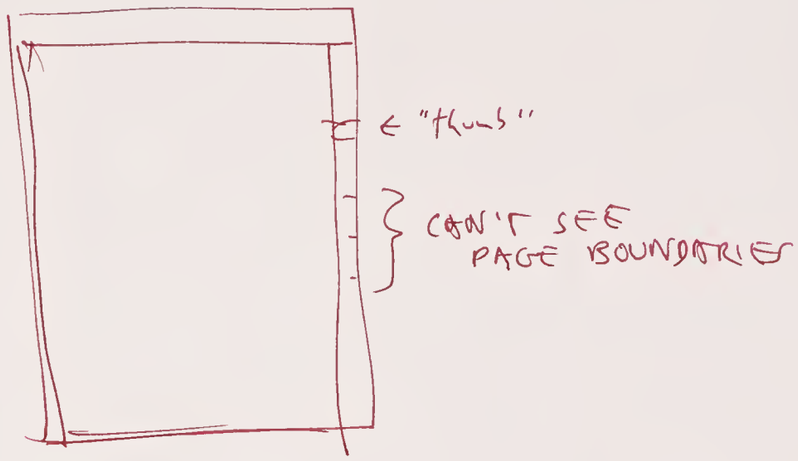
THOUGHTS ARE LOST IN WP


Clusters of interf
able to keep text part together
feedy it to keep documents.

# 3. KEY VISUALIZATION: TRANSPOINTING WINDOWS

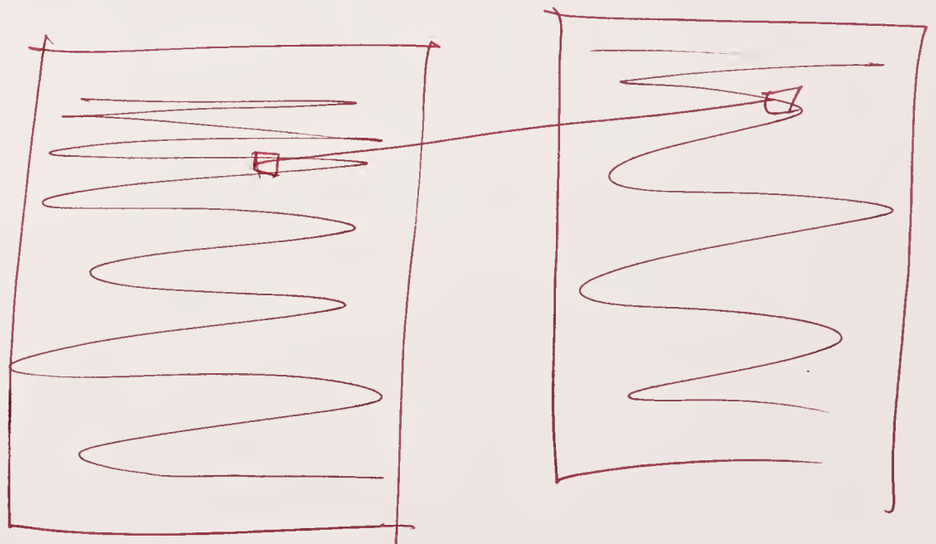
Xerox PARC windows




trasporting windows

~~Nelson-Windows~~

First proposed in print by TN about 1969?



1992?? Professor Tolkachov (Russia) SHOWED IT TO ME IN HYPERCARD ON THE MAC.

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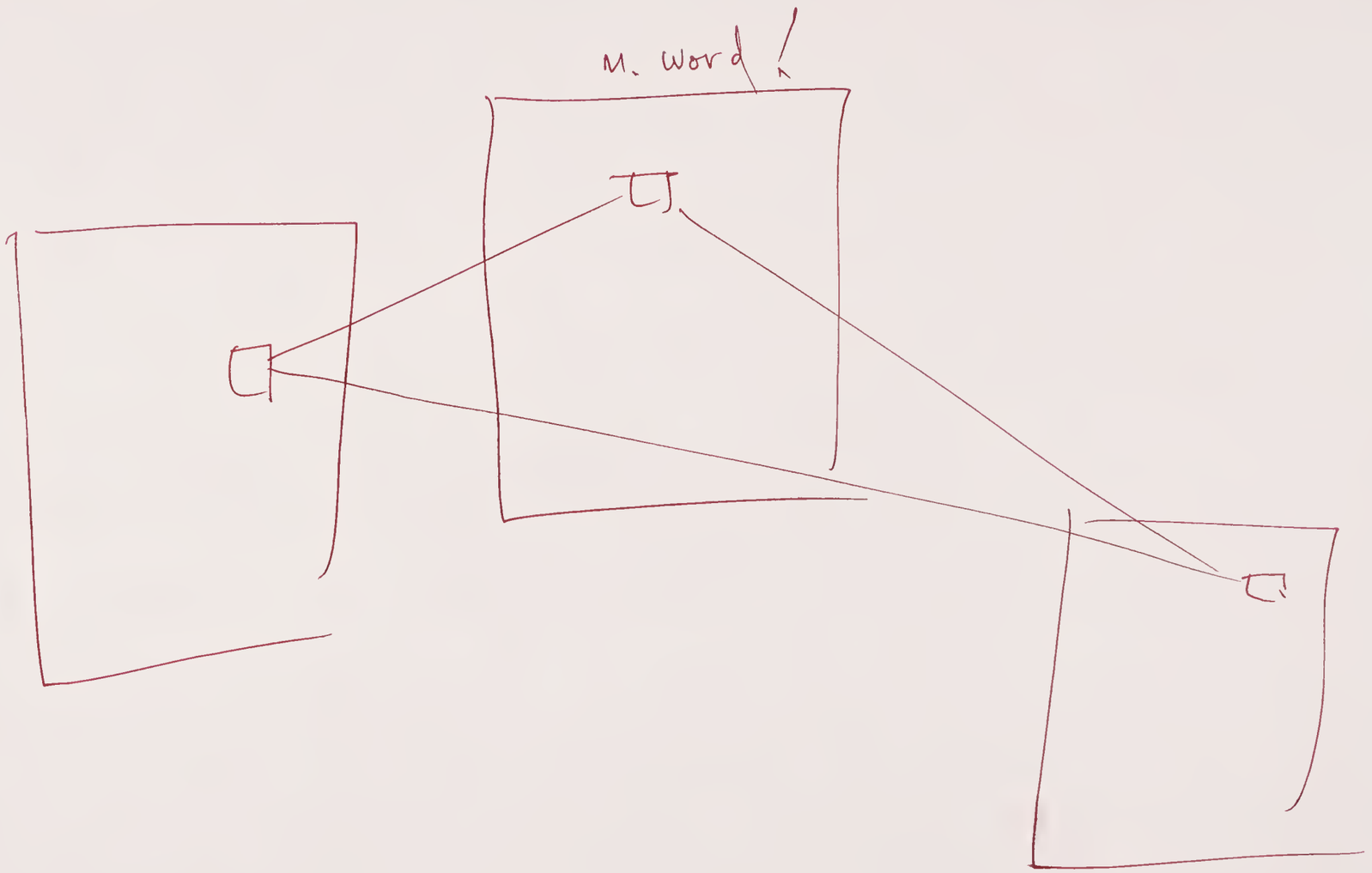
LAST WEEK.

Finally this has been implemented by

Ian Heath of Microcosm Project, Southampton U.



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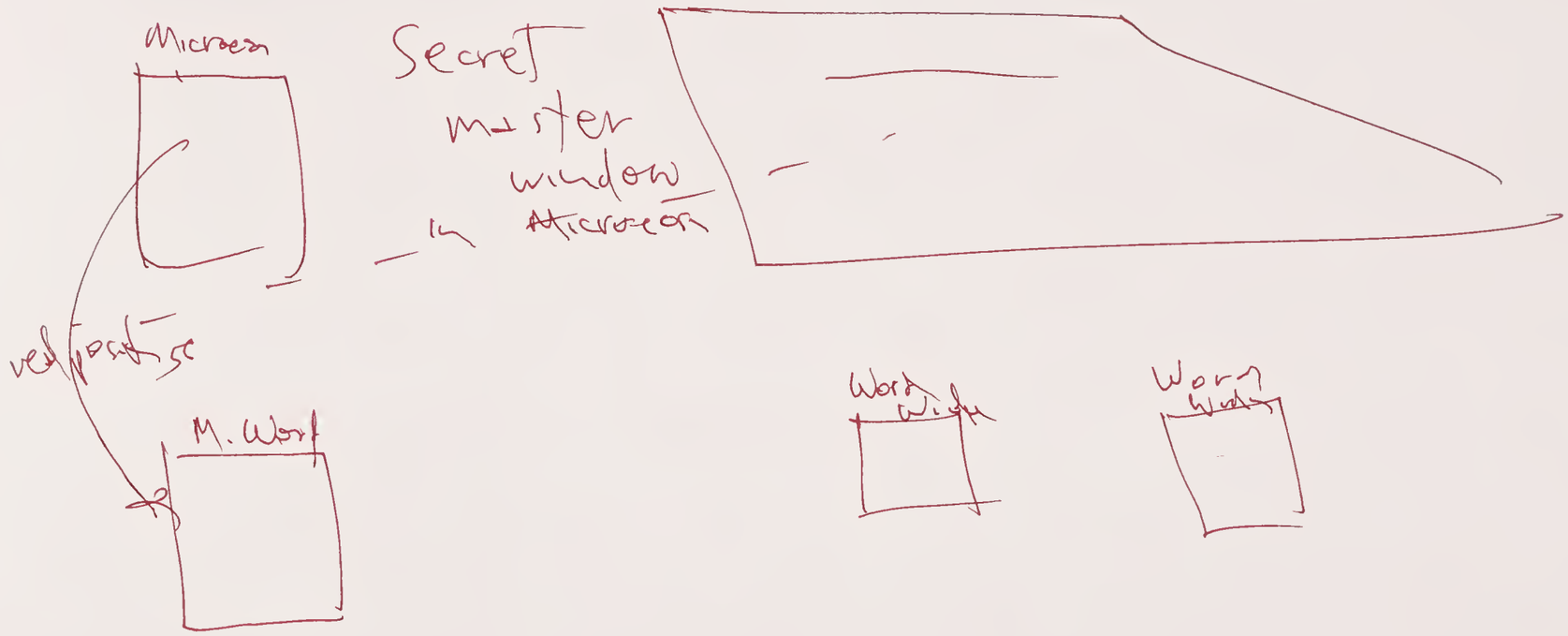
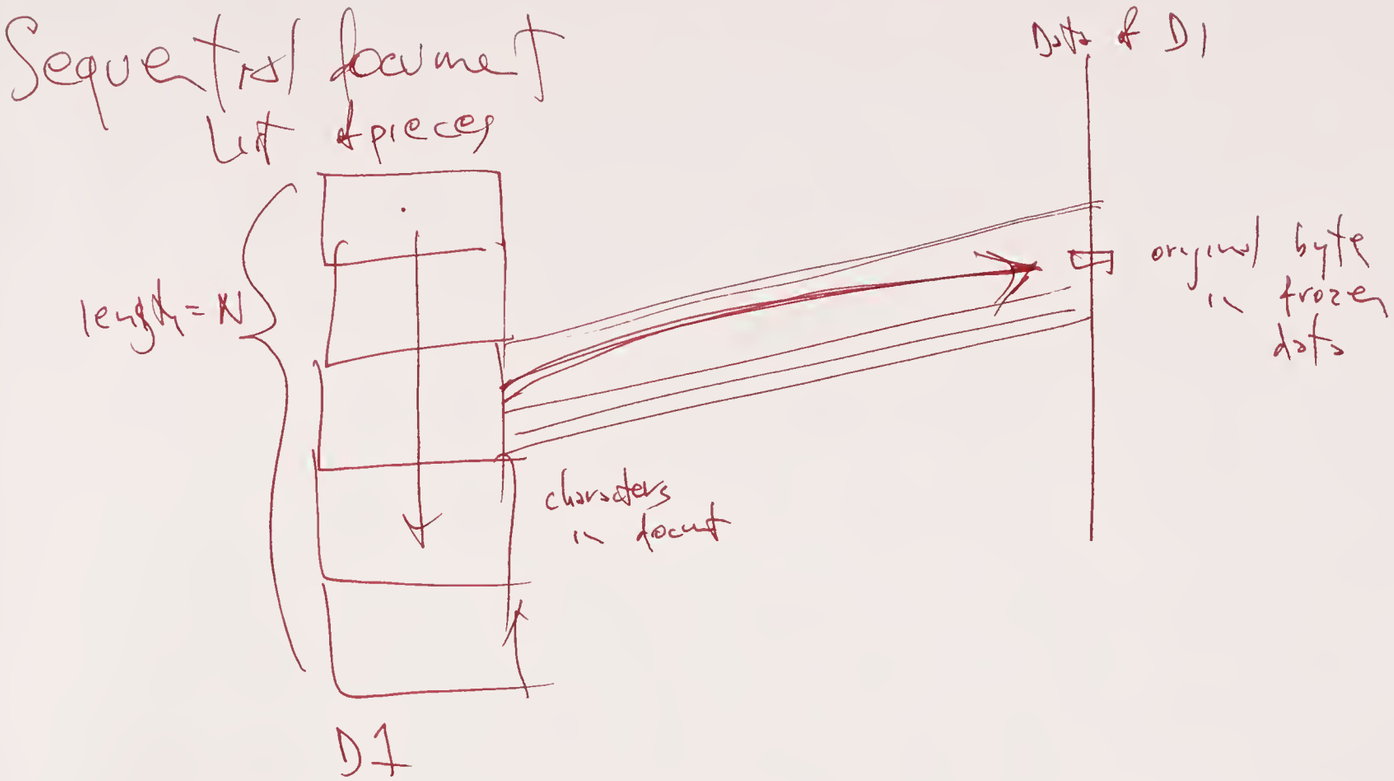
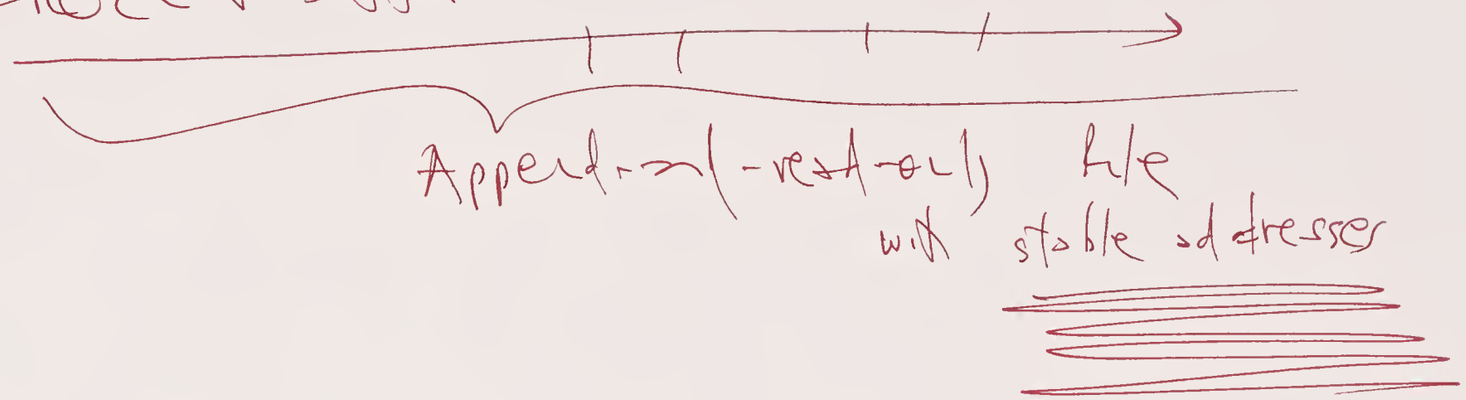
How it works




Sequential document
List of pieces
length = N
characters in document
D1
Data of D1
original byte in frozen data

Xanadu model:

FROZEN DATA

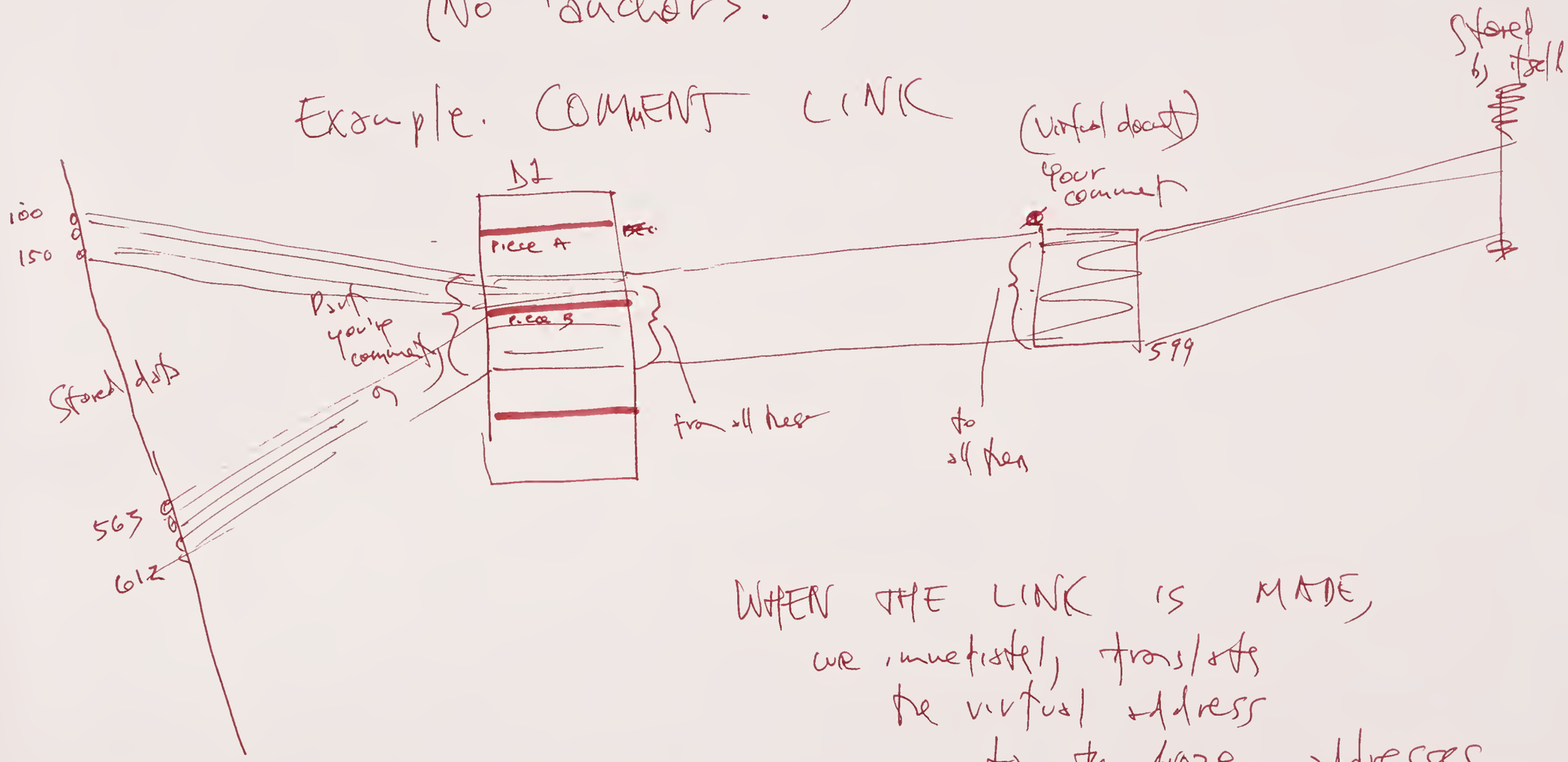



All the algorithms
are manipulations of these addresses.

# LINK IS BETWEEN DATA ECEMENTS.

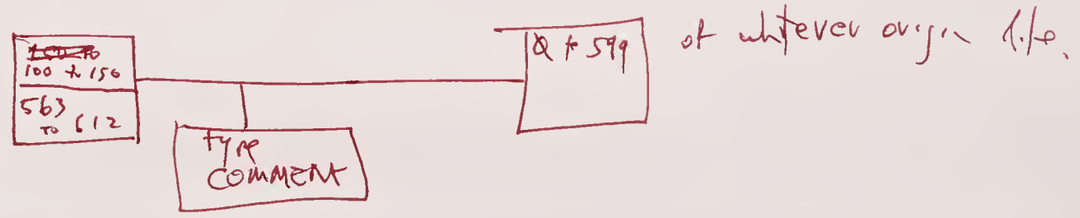
(No "anchors.")

Example. COMMENT LINK




WHEN THE LINK IS MADE,
we immediately translate
the virtual address
to the frozen addresses.

Result:



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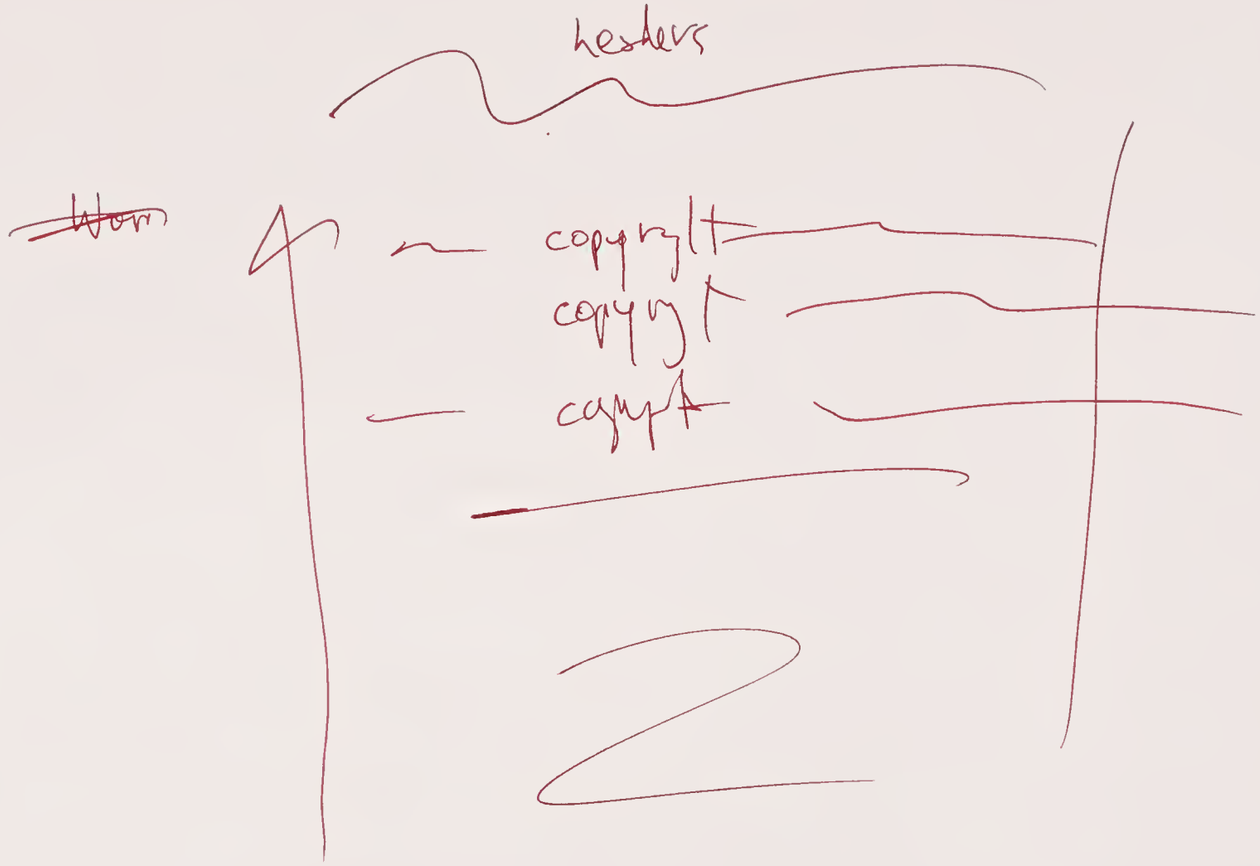



New ways of visualizing text - for instance, rapid scrolling of messages with some particular word in the same position.

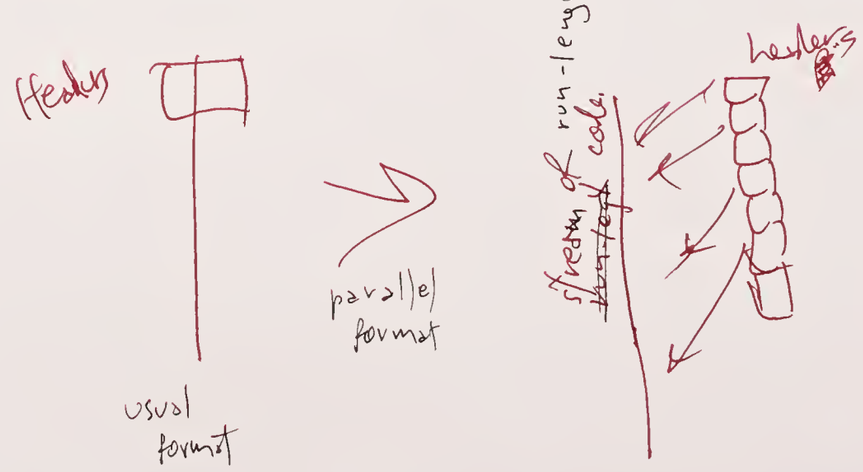
# OBJECTIVES:

Links & transclusions for simple text documents
NO FONTS.

Esp EMAIL.

2. Extend to some algorithms to AUDIO.

(3. Fax.)



# Desirable PRODUCTS of our workshop.

**Prep** — take data and put in streamy format.

Eg { TAKE ALL EMAILS, concatenate in chronological order, THROW OUT DUPLICATES }

**Control** {
- Rearrange, Insert, "Delete" } in virt. document
- Make, Follow } { link, transclusion

\+ Some visualization

**Extras**

HTML Compiler

Hypertime search

Translating text versions from other software into OSMIC.

TN

Get rid of old storage Presentations

↓

Go to PURE STRUCTURE OF IDEAS

IGNORE ALL PRECEDENT

PARC

Map all information to ancient information packages:

cards
folders
icons
etc.

Paper is where you put an idea
→ consider it.

↓

Better & richer paper:
↑ better & richer expression of ideas.

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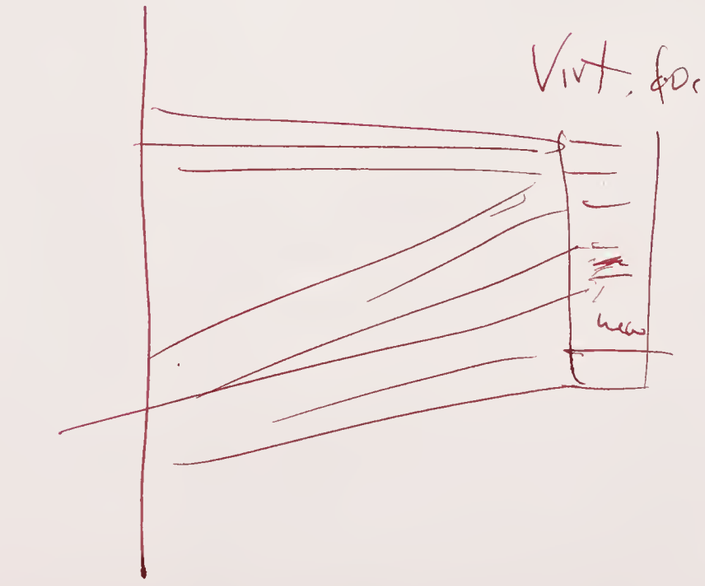
I believe the pure structure of text should be

# VIRTUAL DOCUMENTS

with

## SIDEWAYS ACCESS

to original content
and to other versions.




Ordinary

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# OUR E-MAIL ADDRESSES=

t95129ku@sfc.keio.ac.jp

Ken'ichi Unuse.

baseman@sfc.wide.ad.jp

Shu Nakamae

Also = Kei Kawai kevo@sfc.wide.ad.jp

Ted Nelson ted@xanadu.net

Yukihiko Yoshida t93502yy@sfc.keio.ac.jp

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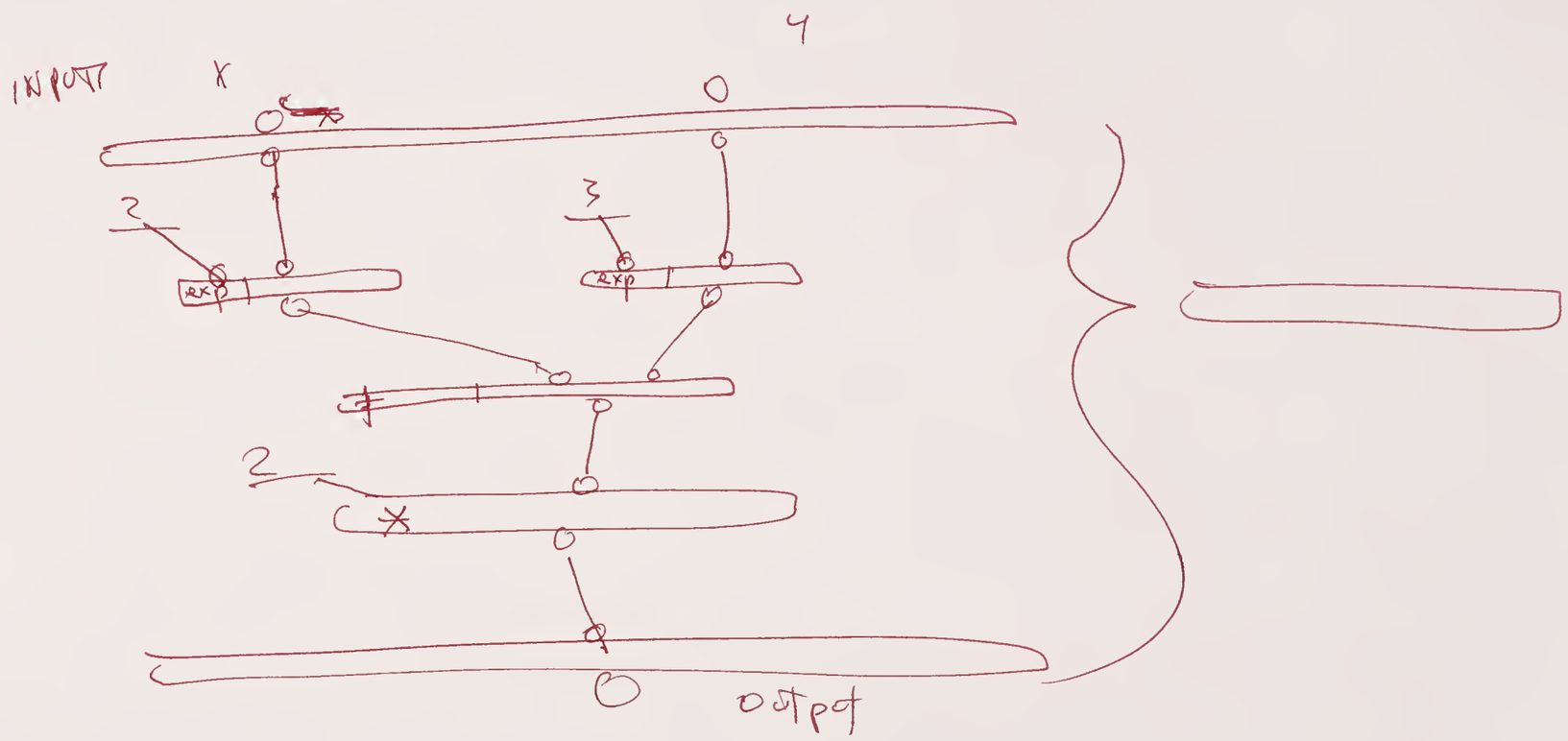
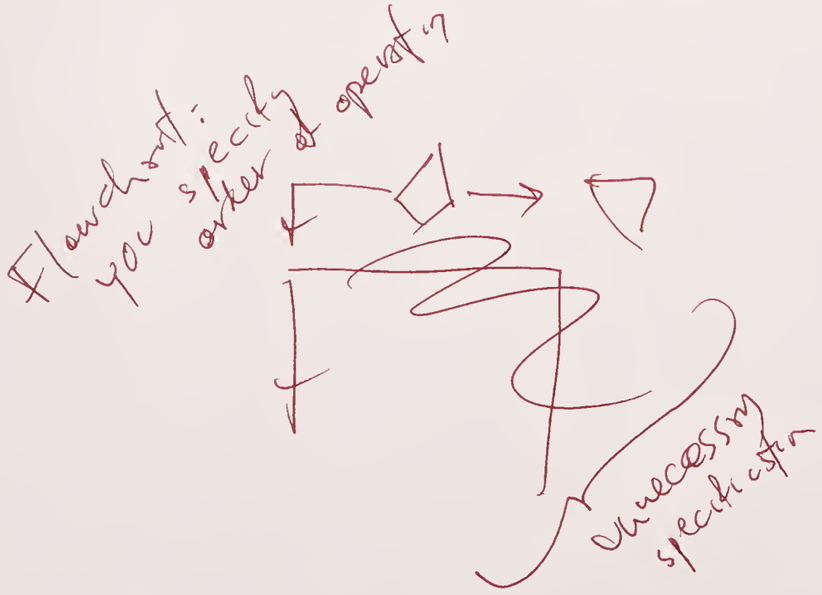
MISCELLANEOUS DISCUSSIONS —

# Prograph: GRAPHICAL DATAFLOW LANGUAGE.

$2(x^2 + y^3)$



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Erdös numbers:

0 if you are Erdös.

1 if you have collaborated w/ Erdös.

2 if you " " w/ a Erdös!

.
.
.

Kevin Bacon numbers

0 if you're Kevin Bacon

1 if you've been in a movie with Kevin Bacon

2 if you " " " " " with a KB1

etc.

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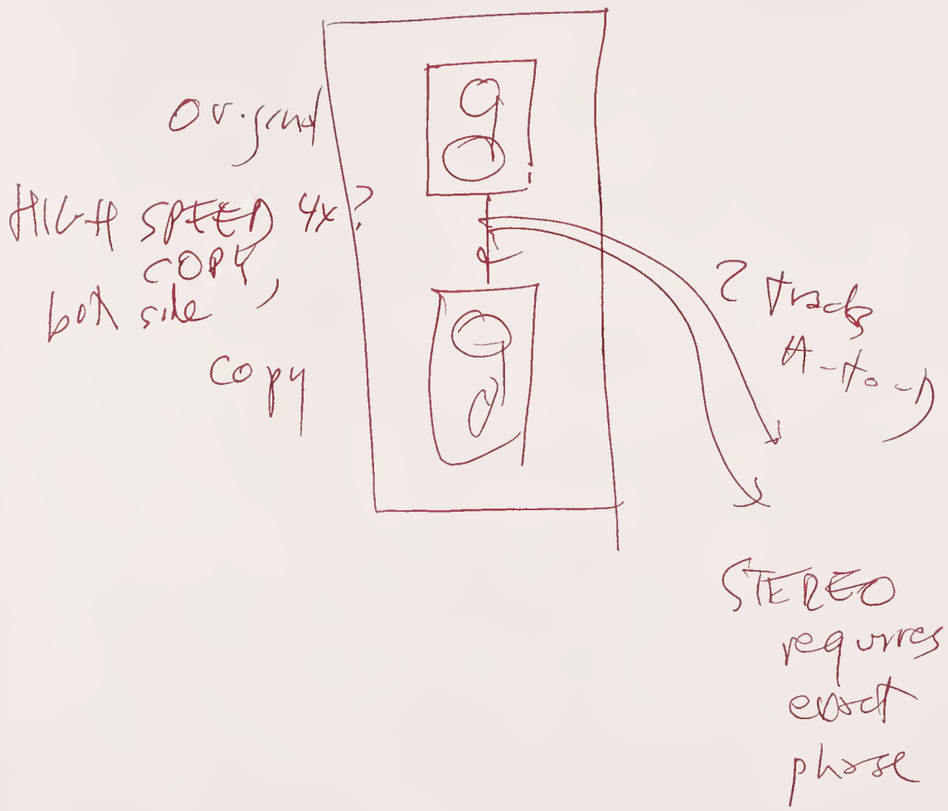
HOW I HOPE TO DIGITIZE MY AUDIOTAPES——



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"The Warrior"
1860

1860

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[Where "The Warrior" patrolled]

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France

Liverpool

London

Southampton

Portsmouth